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REPORT C1
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Riding patterns and
trends on the Gov-
ernment of Ontario's
GO Transit rail service

REPORT C1

May 23 to December 31, 1967

The first of a series of research
reports. Subsequent reports will
be issued at quarterly intervals.

JUNE, 1968

Government of Ontario Transit

is administered by the Department
of Highways of Ontario, and operated by the Canadian National
Railways.

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1. SERVICE PACKAGE

1.1 Introduction

On May 23, 1967, the Government of Ontario's GO Transit commuter rail service was inaugurated by Premier John P. Robarts. The specially designed green and silver trains provided Ontario Lakeshore residents east and west of Toronto with a comfortable, fast and competitive alternative means of transportation. The participation of the provincial government in this project marked a significant new approach to urban transportation planning.

Details of the phasing-in and physical characteristics of the service are outlined below in sections 3 and 4. Readers desiring a more comprehensive account of the GO Transit project may obtain an illustrated report entitled "GO Transit: A New Approach to Urban Transportation" by writing to:

Government of Ontario Transit,
Suite 614, Arcade Building,
74 Victoria Street,
Toronto 1, Ontario.

1.2 This report

In announcing the proposed service in May 1965, Premier Robarts made it clear that the rail project was, in its initial phase, an experiment. A detailed program of study and research into the impact of the new service is presently being carried out. This report is the first in a series of research reports and deals specifically with riding patterns, trends and characteristics of passengers riding GO Transit trains from the day of inception on May 23 to December 31, 1967.

The following sections of Part 1 deal briefly with certain physical aspects of the GO Transit service. Parts 2 and 3 proceed to outline the observed response patterns, riding trends and characteristics of passengers, and Part 4 deals with factors which may have restrained the usage of GO Transit service.

1.3 Phasing-in of GO Transit service

As mentioned above, the Government of Ontario's GO Transit rail service was officially inaugurated on May 23, 1967. Twenty-one trains operated that first day in both directions between Oakville and Pickering. Four serviced the area beyond Oakville to Hamilton. These trains made up the first phase of service which was followed by three successive phases beginning June 5, June 26 and September 5, culminating in full service of 51 trains daily during the Monday-Friday working week.

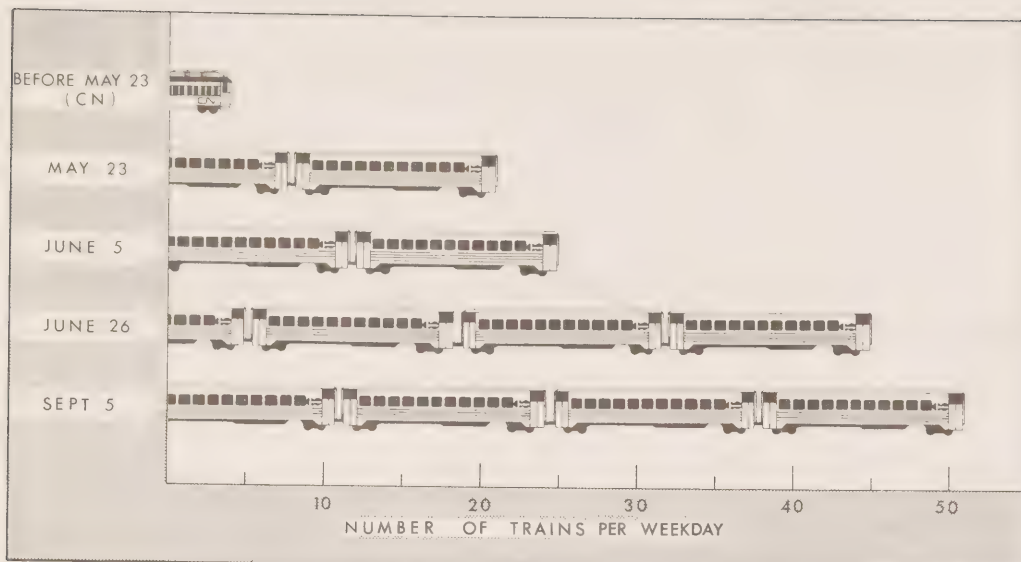


FIGURE 1: GO Transit service was introduced in four phases.

These steps in service should be borne in mind when making subsequent analysis of passenger carryings, particularly before and after June 26, when 20 additional trains were introduced into the service pattern.

36 trains per day were instituted on July 1, to run during weekends and holidays. Complete schedules of weekday and weekend trains may be found in Appendix 5.1. The GO Transit fare structure is shown in Appendix 5.2.

For many years prior to GO Transit's inauguration, the Canadian National Railways had been operating four commuter trains (two morning, two evening) between Toronto and Hamilton. When GO Transit services were introduced, the CN commuter trains were discontinued. The last run of CN service occurred on May 19, 1967.

1.4 GO Transit system

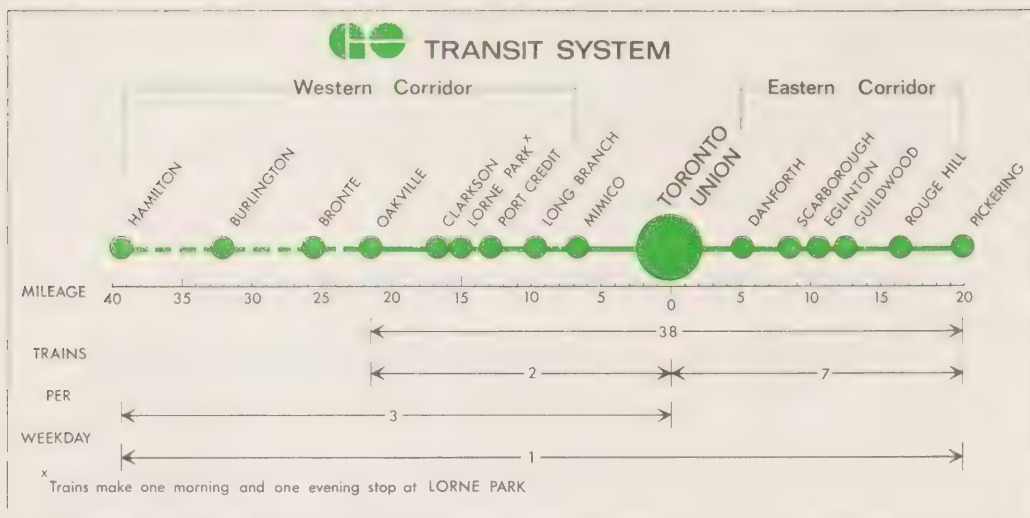


FIGURE 2: Locations of GO stations, their proximity to Toronto, and the number of trains operating through, or terminating at, Union Station.

The maximum travel time from the eastern terminal at Pickering and also from the western terminal at Oakville is 37 minutes to Union Station. The travel time between Toronto and Hamilton is 64 minutes.



2. RESPONSE PATTERNS & TRENDS

2.1 Introduction

This part deals with data collated from ticket records supplied to the Study by the Canadian National Railways. The ticketing system used by GO Transit was designed to fulfil two functions: to meet the normal ticketing requirements of a rail system; and to provide the raw material for a continuous, detailed breakdown of information on passengers' origins and destinations by individual trains.

2.2 Wednesdays chosen to represent weekdays

Although the raw data was available on a daily basis, the sheer volume of information made the analysis of each separate weekday impractical. Consequently, in order to measure the response of passengers to the GO Transit service, Wednesdays were chosen to represent the weekday pattern of riding and to form the basis of weekly and monthly trends.

Figure 3 shows the magnitude of travel on Wednesday in relation to the other days of the business week. It

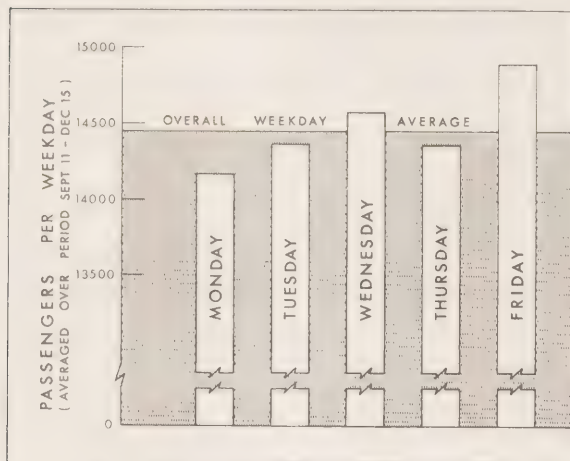


FIGURE 3: Wednesday is a representative weekday.

can be seen that Wednesday was slightly above the overall weekday average. Tuesday and Thursday fell slightly below, while Monday and Friday provided the extreme low and high ends of the scale.

Wednesday, then, was as representative as Tuesday or Thursday and had the advantage of being the day on which previous counts had been taken on the CN trains prior to GO Transit.

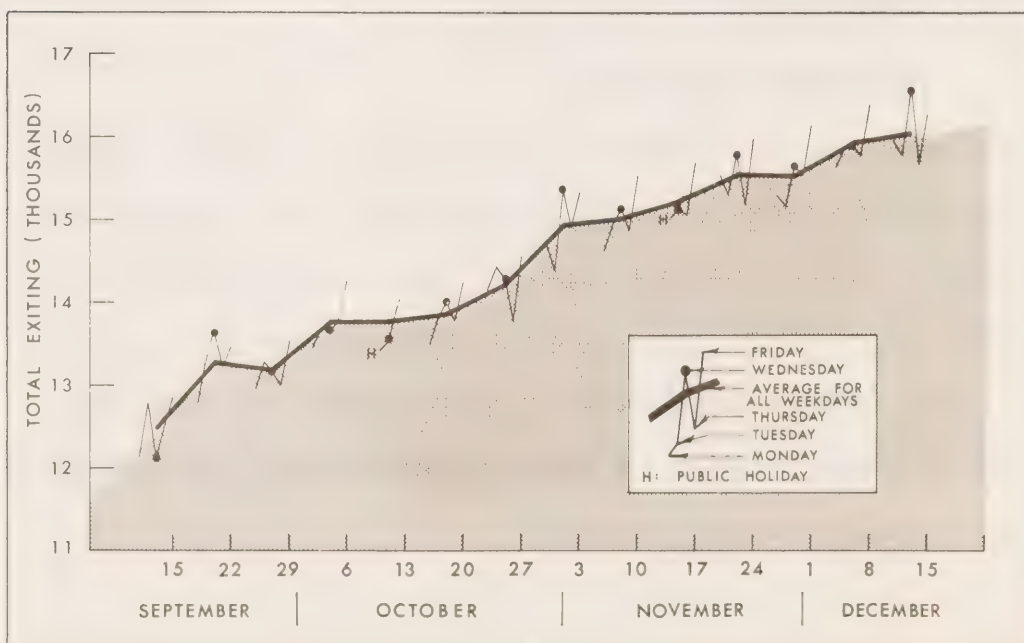


FIGURE 4: Weekday exiting over a 14 week period.

From Figure 4, it can be seen that the total number of passengers on Wednesdays fell on or below the weekday average on 6 occasions; above on 8 occasions during these four months.

Many of the charts that follow are based on the average Wednesday carryings to form comparisons and trends from month to month.

Reference is frequently made in this report to "total exits" or "exiting". These refer to the number of passengers getting off trains at the various stations, as much of the data is derived from tickets handed in at these destination, or exit, stations. Clearly the total number of people exiting at all stations in any one day is equal to the total number of trips that were made on GO Transit that day.

2.3 Monday to Friday weekly trend

Figure 5 shows the average weekday carryings for each week since the start of GO Transit service. The total trips are broken down into riders exiting at Union Station and in the east and west corridors. (Public holidays have been excluded from the weekday average and are reported separately in section 2.5).

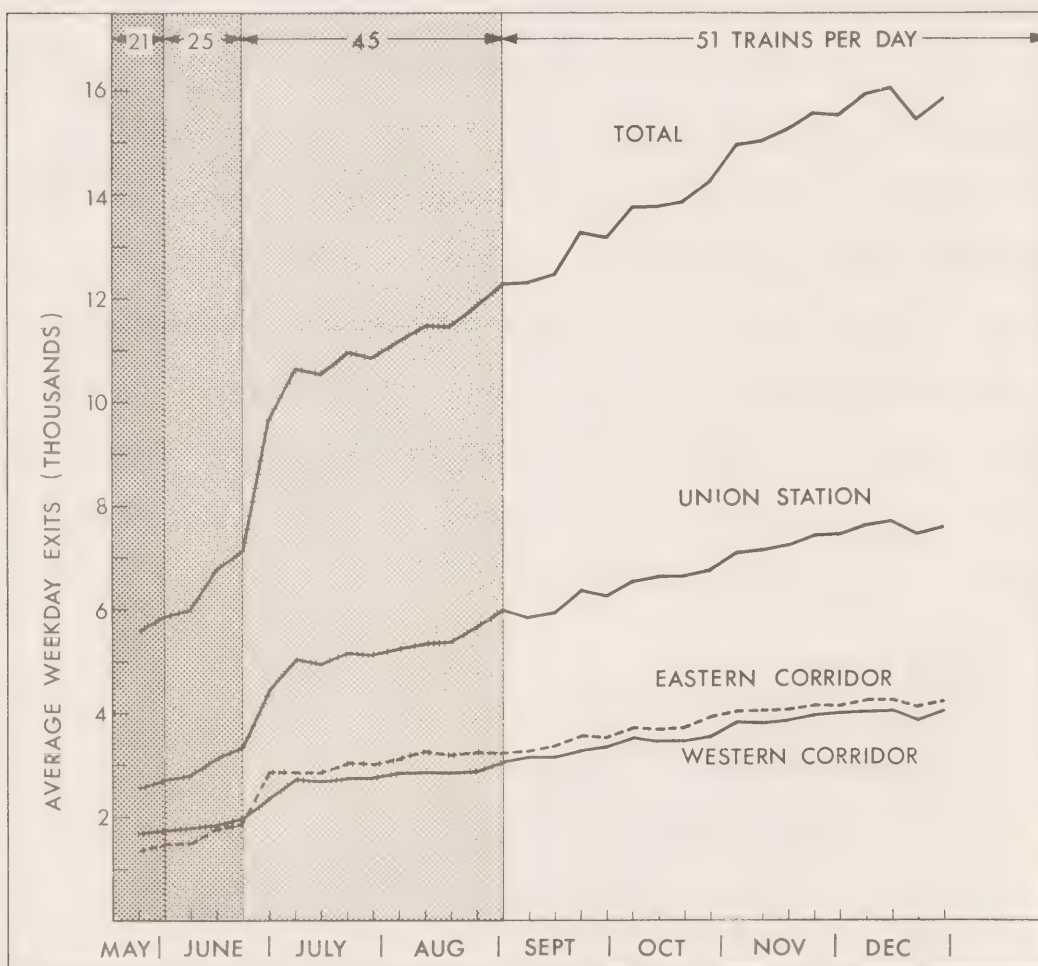


FIGURE 5: The number of weekday trips taken on GO Transit increased each month since the start of the service.

Total trips per day averaged about 5,600 at the start of the service when 21 trains a day operated. The carryings took a large jump after June 26 to about 11,000 per day when the service was increased to 45 trains. The full planned service of 51 trains per day came into operation on September 5, and the trend continued upward through the fourth quarter of 1967.

- The weekday average increased from 12,300 during the second week in September to 15,850 during the last week in December, an increase of 29%.

Union Station exits followed along the same pattern and represented slightly less than half the total exits for the whole system.

During the initial phasing-in period, the schedules of trains serving the west were somewhat more attractive than those serving the east, and accordingly patronage was higher in the western corridor. However, after June 26th, when 20 additional trains were introduced, patronage from the east surpassed the west and has maintained that position ever since.

Total weekday trips showed consistent growth since late July, when the service was almost at full planned capacity. This growth trend was linear up until the Christmas period, when carryings predictably dropped off. It could be said that commuter rail carryings traditionally have experienced seasonal uplifts from early fall until the end of winter and this, combined with the continued natural growth of GO Transit riding, accounted for the consistent upward trend.

The above interpretation, however, assumes that the same growth factors relate to all weekday riders. The situation is not quite as simple as this. Weekday riders can be conveniently divided into two main categories: the regular commuters, mostly using the service during peak times; and the casual user who travels mainly in the off-peak periods. These two types of riders are not necessarily influenced by the same factors. For instance, the increased shopping activity in the downtown area during November and December was seen to boost off-peak riding but did not significantly affect peak riding. It is therefore of value to study riding in these two periods separately. This is dealt with in section 2.4 - "Trends in peak and off-peak riding".

2.4 Trends in peak & off-peak riding

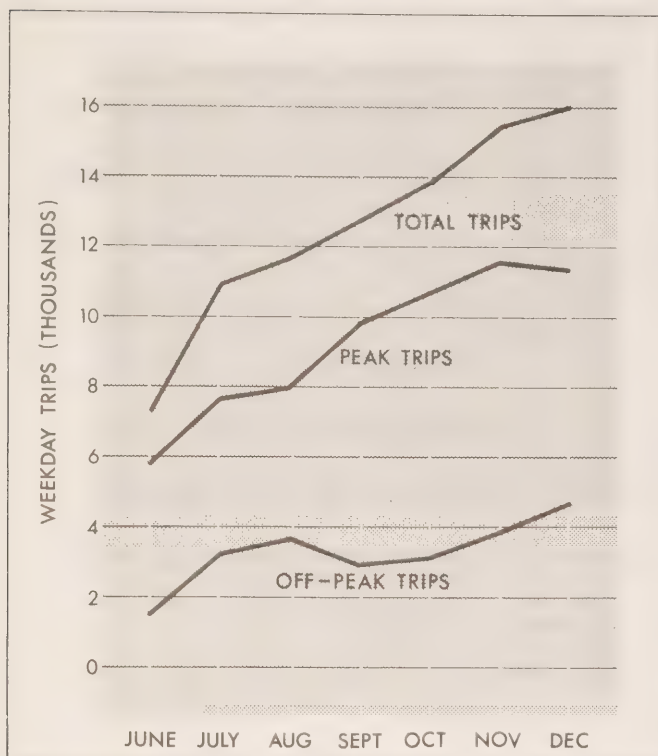


FIGURE 6: Peak and off-peak riding.

Weekday passengers riding inbound towards Toronto Union Station from both the east and west corridors during the 6 to 9 a.m. period were considered a.m. peak travellers. Those riding outbound in the evening between the hours of 4 and 7 p.m. were con-

sidered p.m. peak passengers. All other passengers were considered travelling in the off-peak.

Peak trips : The number of trips taken during the morning and evening peak periods increased each month until December, when some tapering off was experienced due mainly to the influence of the Christmas holiday season. The rate of increase of peak trips was also low in August probably because of the many people on vacation during this month.

- Peak trips ranged from 68% of all weekday trips in August to 79% in June and October.

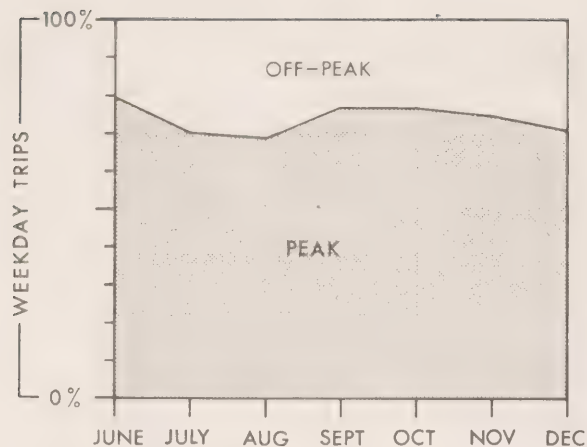


FIGURE 7: The ratio of peak to off-peak riding varied by month.

It should be noted that although the percentage of peak riders to all riders fell in July and August, the actual number of peak trips increased. The percentage decrease was caused by the increase in off peak riders which boosted total riding during this period.

Off-peak trips : Whereas the trip purpose of the majority of riders travelling during the peak was to go to and from work, which to a large degree suggested riders committed to GO Transit, the work trip purpose was not as significant during the off-peak periods. Shopping, business trips, personal and recreation purposes all played a part in influencing off-peak riding and these, in the majority of cases, were uncommitted or irregular trips causing wide fluctuations in off-peak riding. During the summer months, school-aged children were able to travel with their parents; regular workers were on holidays and were able to travel when they wished; outdoor recreation facilities were in full swing. These and many other attractions caused more people to travel

in off-peak times. This would explain the growth of this type of trip during July and August. Off-peak trips were boosted again in November and December when many Christmas shoppers used GO Transit to travel downtown. The large department stores kept open until up to 9:30 p.m. prior to Christmas and this caused an increase in early evening off-peak riding.

- Off-peak trips ranged between 21% and 32% of all trips during the June-December period with the highest number of off-peak trips occurring in December.

2.5 Saturday, Sunday & holiday riding

The GO Transit weekend and holiday service was inaugurated over the Dominion Day holiday period of July 1, 2 and 3, and comprised the full planned schedule of 36 trains per day on hourly headways.

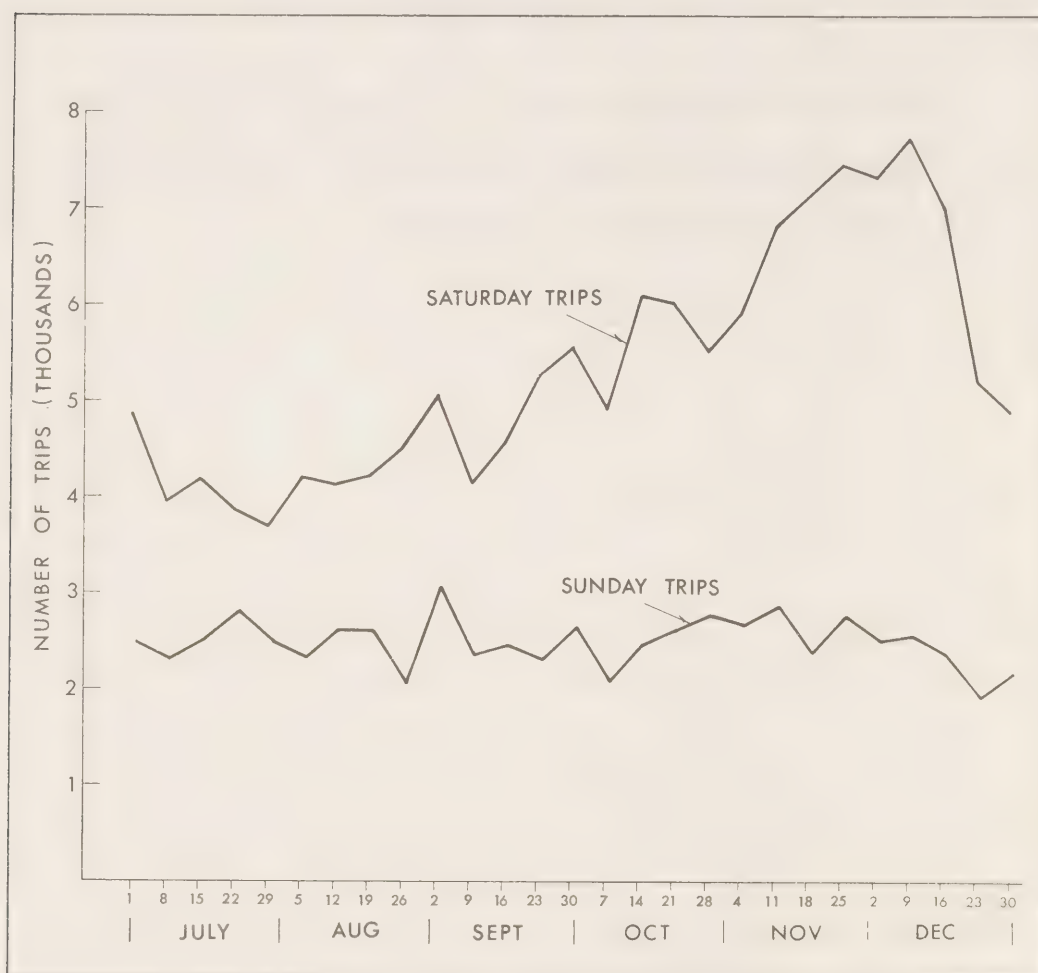


FIGURE 8: Weekend trips.

Saturdays : With the exception of the Saturday trips just prior to and after Christmas, a marked upward trend in Saturday riding was experienced with a slightly wider

range of week-to-week fluctuations than on weekdays. These fluctuations were to be expected as riders on Saturdays tend to be less committed to using the GO Transit system than their weekday counterparts.

- Saturday trips rose from 5,500 on October 28 to a peak of just under 8,000 on December 9, an increase of 45% in six weeks.

This was mainly due to the large number of Saturday shoppers who used GO service during November and the first three weeks in December. There seemed to be little "last minute" Christmas shopping on Saturday December 23, when the number of trips fell to just over 5,000 and further to 4,900 on December 30, equivalent to the level previously experienced around the beginning of October.

Sundays : Sunday trips on GO have not shown any significant growth since the service started with fluctuations ranging between 2 and 3 thousand passenger trips per Sunday. One exception occurred on September 2, when a number of special stops were arranged at the Canadian National Exhibition for a Billy Graham rally at the Exhibition grounds (See Figure 8).

Holidays : The table below shows the record of trips taken on public holidays since the service was first introduced:

			No. of Trips
July 3	-	Dominion Day	5138
August 7	-	Civic Holiday	3213
September 4	-	Labour Day	3788
October 9	-	Thanksgiving	3037
December 25	-	Christmas	2229
December 26	-	Boxing Day	5655
Average per holiday			3843

All these holidays fell on Mondays with the exception of Boxing Day, which was on a Tuesday.

Passenger riding on Christmas day was the lowest of all holidays and among the lightest travelled days since GO Transit started. (The lowest day was the Sunday before Christmas when 1927 trips were made.) Boxing day produced the highest number of riders for any single holiday which was mainly due to many stores attracting after-Christmas bargain shoppers.

2.6 Growth of individual stations

This section takes a look at the number of passengers using the various stations, and also examines the rate of growth of GO Transit patronage at these stations.

The information relates to weekdays and is derived from the total number of people exiting each station during the day, the general assumption being that most people exiting would have also entered that station at some other time of the day.

Western corridor

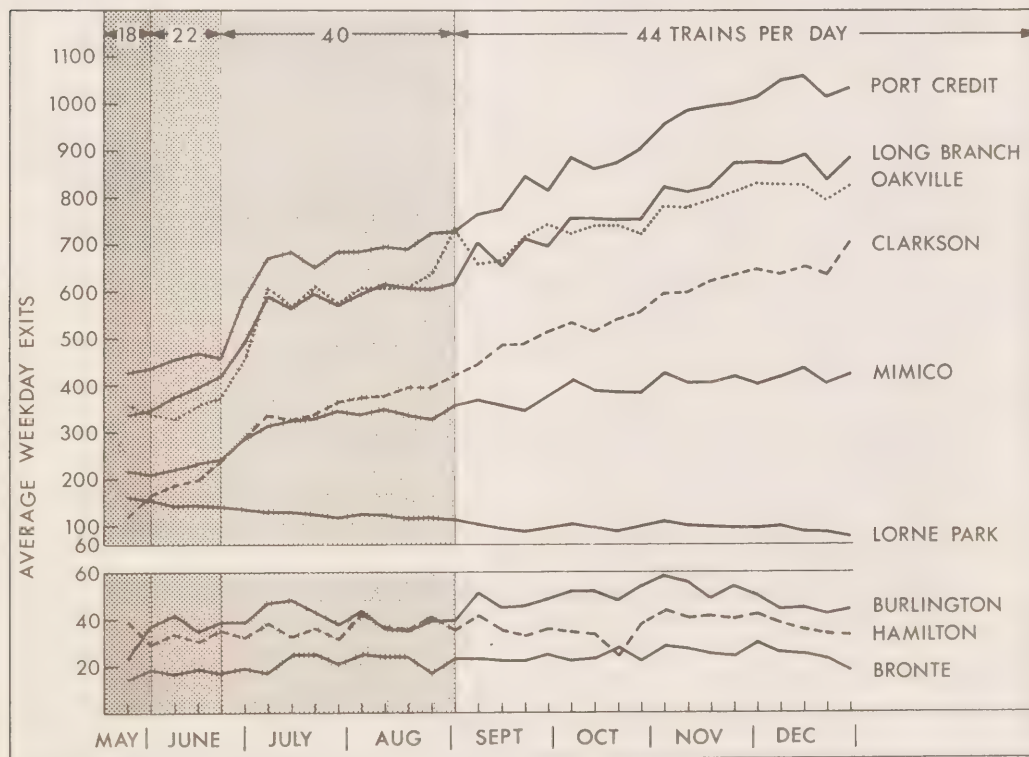


FIGURE 9: Average weekday exits by week at suburban stations in the western corridor.

There were nine stations served by GO Transit in the western corridor. As of September 5, 44 trains per weekday operated to or from these stations with the exception of Lorne Park, which was served by 2 trains, and Bronte, Burlington and Hamilton with 4 trains per day. The trains offering service to these four stations operated during the morning inbound and evening outbound peak hours only.

Eastern corridor

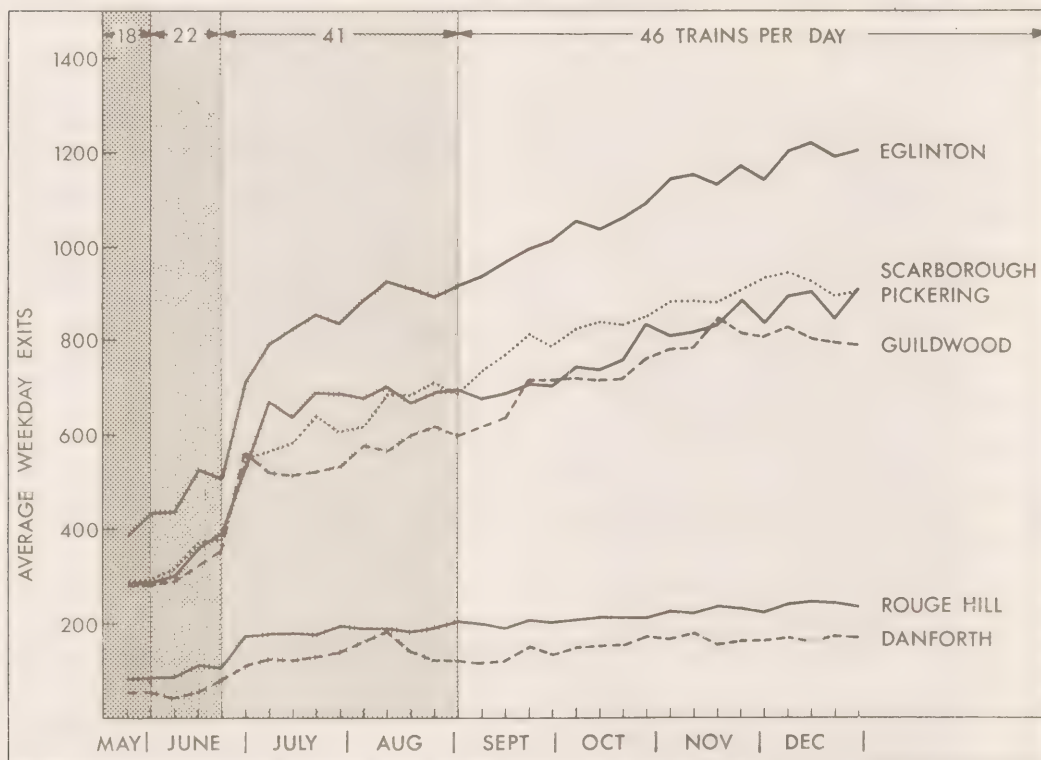


FIGURE 10: Average weekday exits by week at suburban stations in the eastern corridor.

There were six stations served by GO Transit in the eastern corridor and, from September 5, 46 trains per weekday stopped at these stations.

Figure 11 shows the ranking of the stations in terms of average weekday exits per month since June. The number in brackets after each station name refers to the average number of weekday passengers exiting in December.

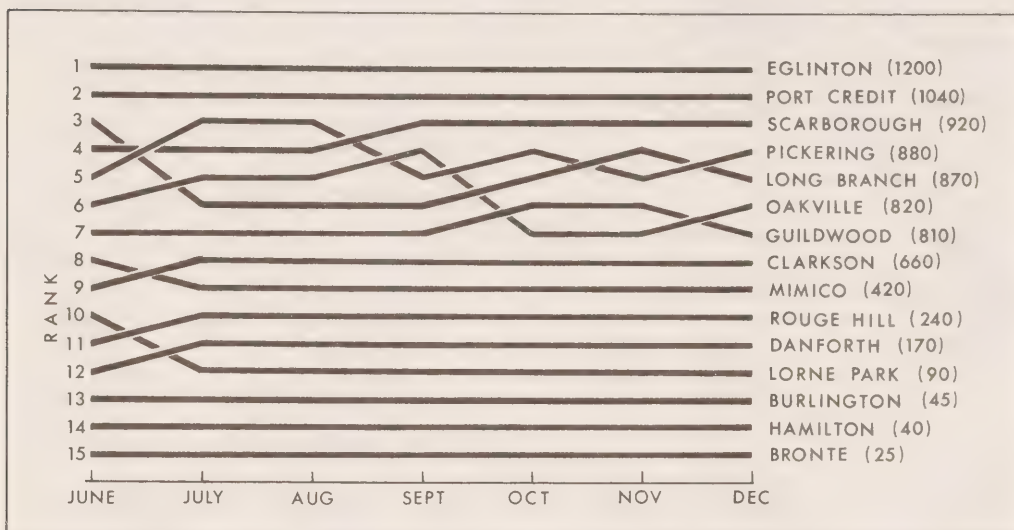


FIGURE 11: Stations ranked in order of patronage.

- Eglinton and Port Credit have remained the two most popular stations since the start of the service.
- Three of the four most patronized stations were in the eastern corridor.
- The four stations with limited service were the four least patronized stations.

The comparative growth of the various stations since the full planned service was introduced on September 5

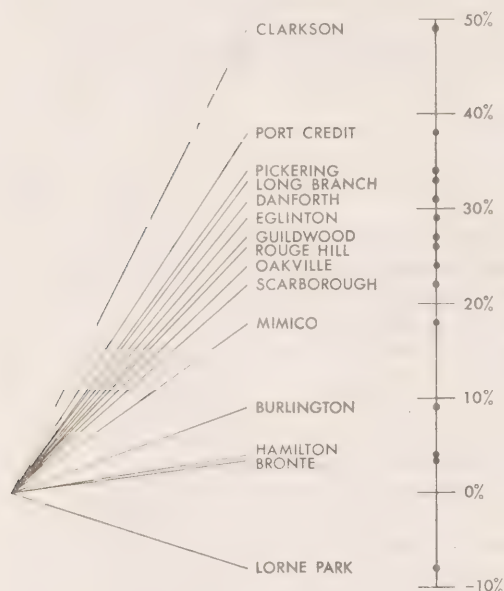


FIGURE 12: *Station growths compared.*

is shown in Figure 12.

The figures have been obtained by using a statistical technique which takes all the weekly averages into account and produces a growth trend for each station. From these individual trends, the percentage increase of patronage during the last week in December

over patronage during the second week in September has been calculated for each station.

- Clarkson showed a noticeably higher growth than other stations.
- Three of the four stations showing the highest growth were in the western corridor.
- The five lowest growth stations were in the western corridor.
- The rates of growth of the stations in the eastern corridor were similar, ranging from 22% to 34%.

2.7 Trips with Union Station origin or destination

- Almost all weekday GO Transit riders either started or finished their trips at Toronto Union Station

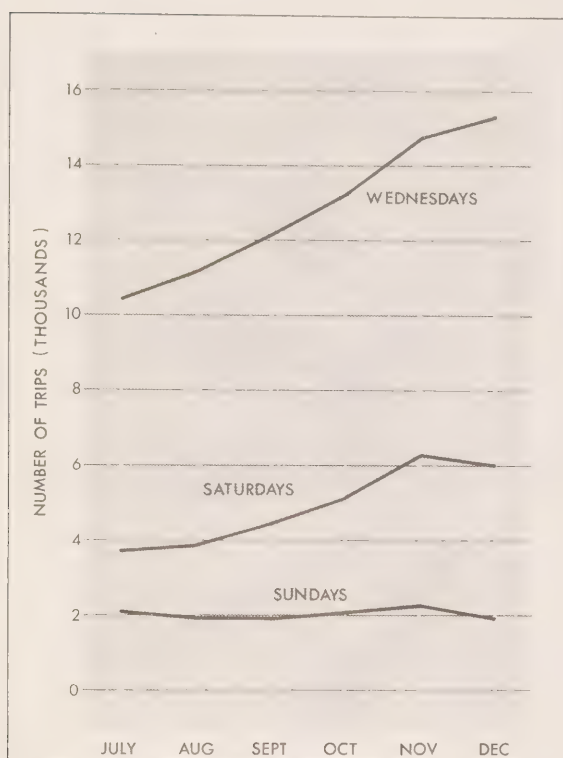


FIGURE 13: The average number of riders whose trips either started or finished at Toronto Union Station.

These Toronto-oriented trips (based on average Wednesdays) increased 48% from an average of 10,400 in July to 15,400 in December and accounted for between 94% and 96% of all weekday trips over this period. The highest percentage occurred for December due, no doubt, to the increased importance of central Toronto for shopping and entertainment prior to Christmas.

- Proportionally fewer trips were taken to or from Union Station at weekends than during the business week

The number of trips between suburban stations and Toronto Union Station expressed as a percentage of

all trips ranged from 88% to 94% for Saturdays and 77% and 85% for Sundays during the last half of 1967. Union Station became increasingly predominant at weekends as Christmas approached.

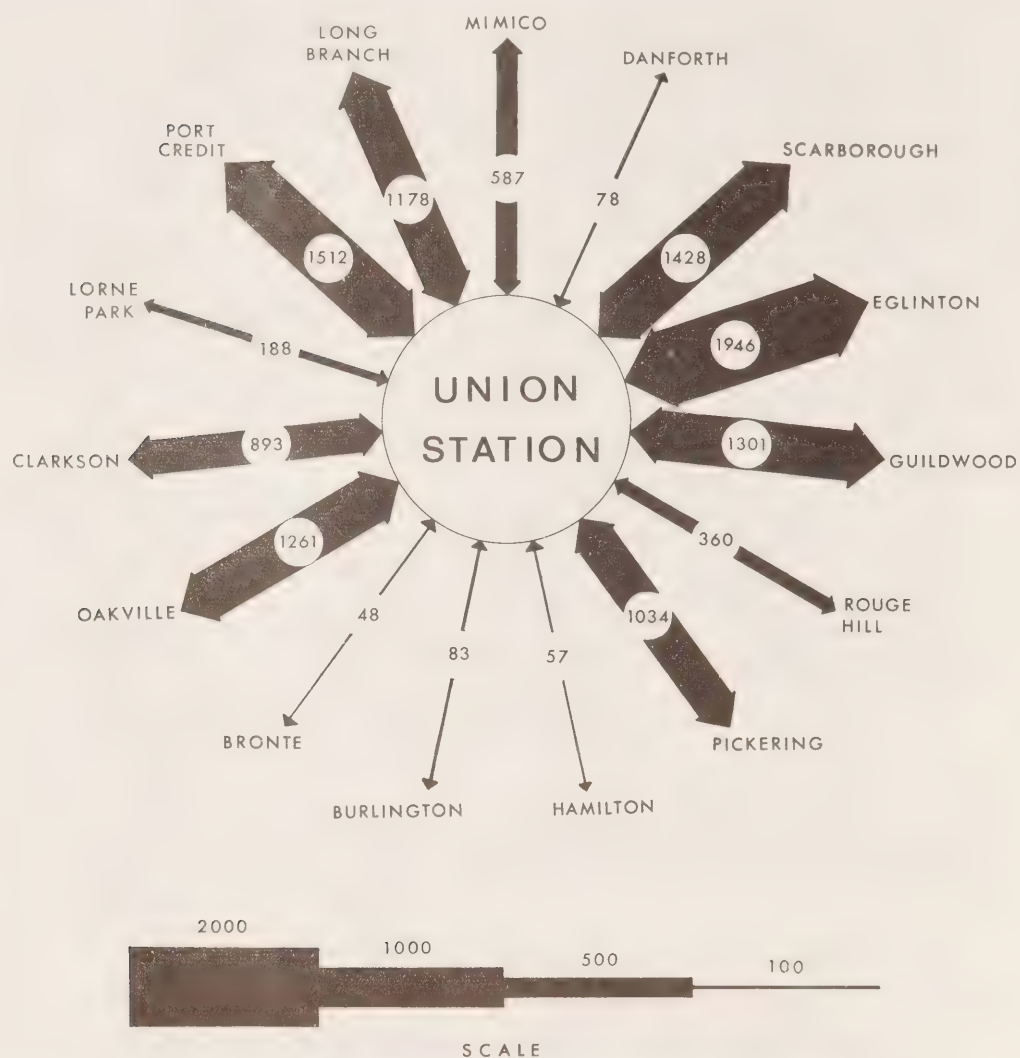
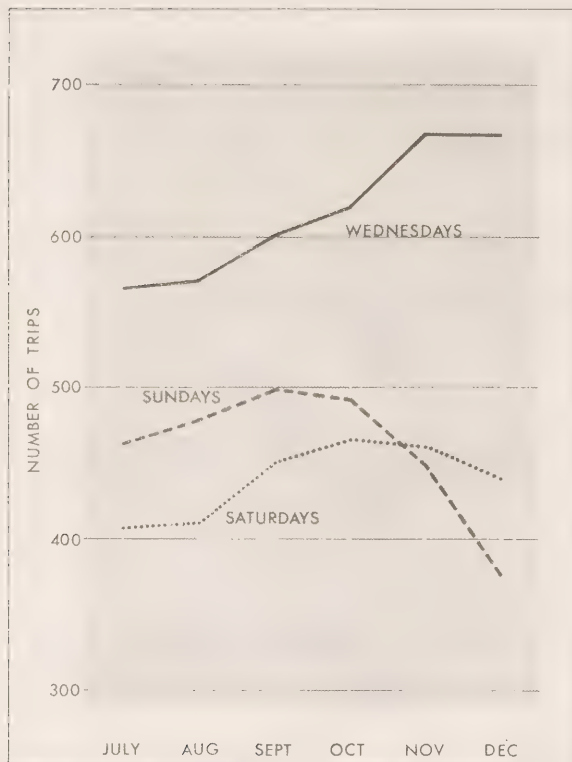


FIGURE 14: Trip exchanges between Toronto Union Station and the suburban stations on an average Wednesday in September.

The relative importance of each suburban station can be seen from Figure 14.

- Eglinton was the most popular station, followed by Port Credit and Scarborough.
- Nearly 40% of all trips were generated by three adjacent stations: Scarborough, Eglinton and Guildwood.
- The 8 most important stations accounted for 88% of the trips.

2.8 Trips within & between corridors



Trips that do not originate or terminate at Toronto Union Station are referred to, for ease of communication, as "intermediate" or "non-central" trips.

These may be taken within the western or the eastern corridors, or between the two corridors. Figure 15 shows how these intermediate

FIGURE 15: *Intermediate trips.* trips have varied during the last half of 1967.

- Non-central trips on Wednesdays increased 17% from July to December, compared with an increase of 48% for central (Union oriented) trips in this period.
- Sunday intermediate trips fell off sharply after October to considerably below the level established in July.
- Non-central trips taken on Saturdays decreased in November and again in December.

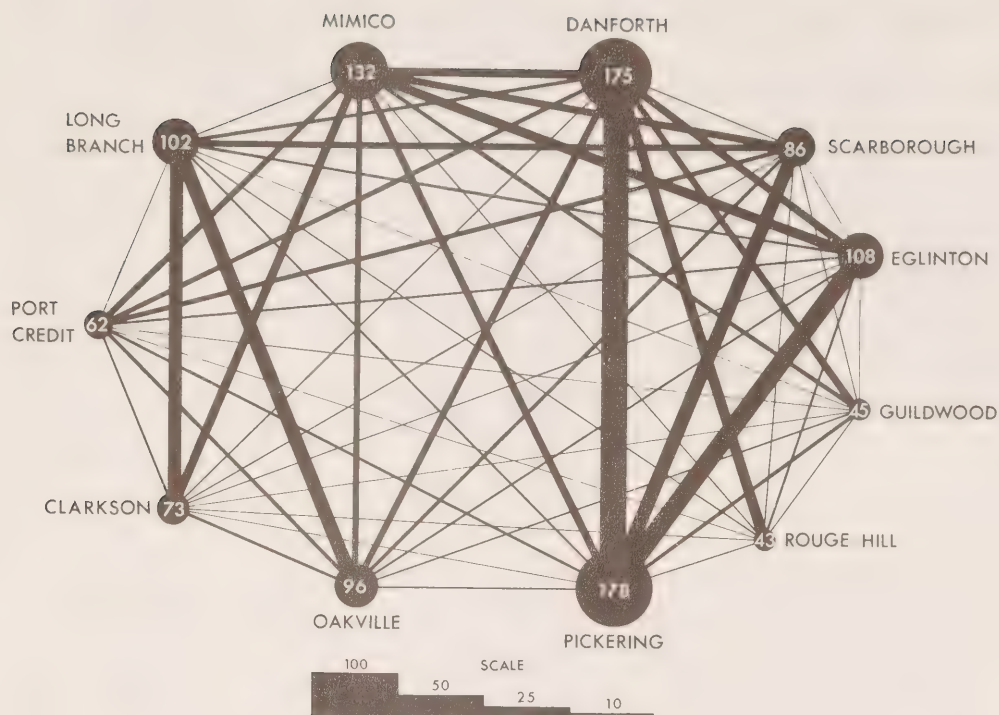


FIGURE 16: The number of trips exchanged between suburban stations on the average Wednesday in September.

- Pickering, Danforth and Mimico were the stations where the greatest number of non-central trips originated or terminated
- By far the greatest interchange of trips occurred between Pickering and Danforth (61 trips), followed by Pickering and Eglinton (43 trips).

The importance of Mimico and Danforth for suburban trip interchanges would be expected; Danforth has a convenient subway connection with mid-town and Mimico has proximity to industry and transit connections with Etobicoke. Pickering's importance can be attributed to its status as a terminal station drawing trips from the eastern communities, notably Oshawa.

2.9 Daily pattern of arrivals & departures at Union Station

The pattern of arrivals and departures of GO Transit riders at Union Station can be seen from Figure 17 below. The difference between carryings during peak hours and other hours in the day was so great that a logarithmic scale has been used to enable the extremes of the range to be meaningfully plotted.

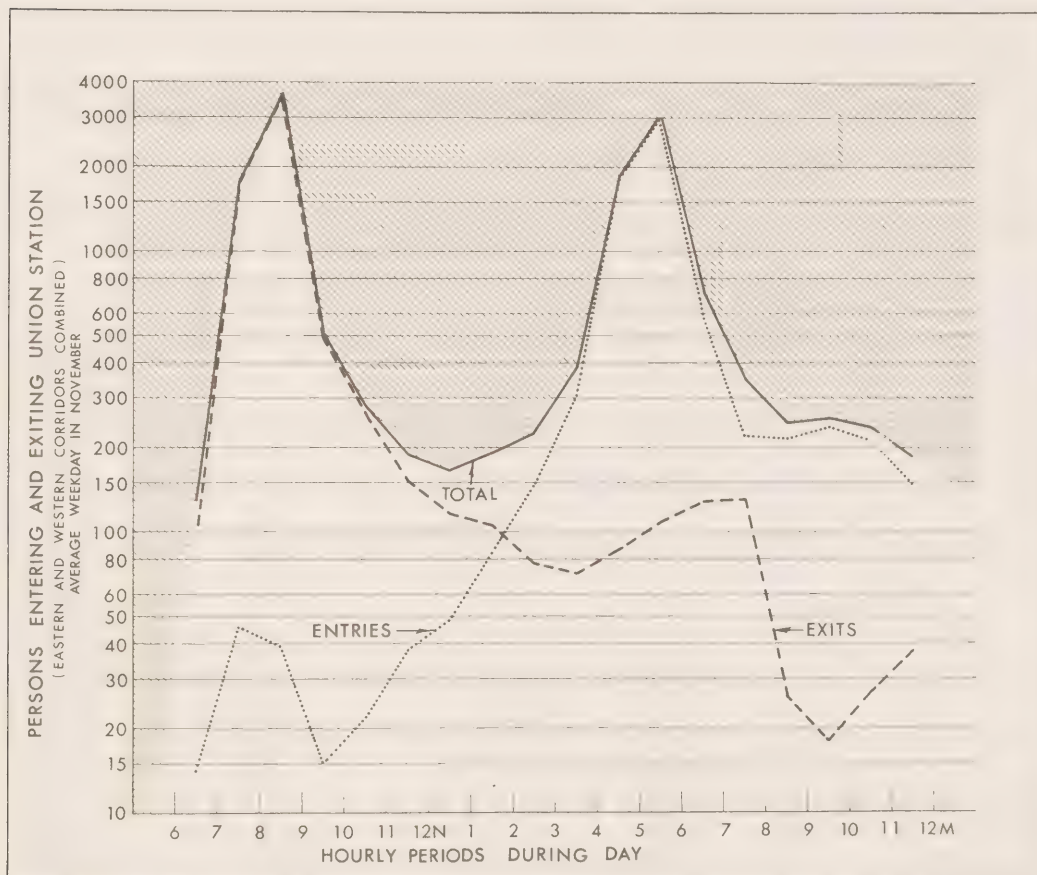


FIGURE 17: The importance of the morning and afternoon peaks on weekdays can be clearly seen.

- Nearly three-quarters of all people exiting GO trains at Union Station on weekdays did so between 7:00 and 9:00 a.m.
- Two-thirds of all people boarding trains at Union Station on weekdays did so between 4:00 and 6:00 p.m.

Proportionally fewer of the outbound passengers (66%) boarded during the evening peak than exited during the morning peak (74%). This indicates that evening peak riding was spread over a longer period than for the morning due to people working late, or staying downtown after work for eating, entertainment or other purposes.

The pattern of entries reveals the small number of people who travelled out from Union Station in the opposite direction to the large majority of riders during the morning peak. The total number of riders boarding trains at Union Station between 6 and 9 A.M. was 100, nearly 2% of the 5,500 people exiting during this period.

The number of passengers leaving trains at Union Station decreased sharply after the morning peak but rose slightly during early evening due, in part, to people using GO Transit to convey them to the downtown entertainment facilities.

2.10 Carryings by individual trains

For the average Wednesday in November:

- In the eastern corridor, 62% of all weekday riders were carried on just 7 trains, representing around 16% of all trains per weekday.
- In the western corridor, 58% of weekday riders were carried on 7 (16%) trains.

The number of riders carried by each individual train is shown by Figure 18 for the western corridor and Figure 19 for the eastern corridor. The general loading pattern was similar for both corridors.

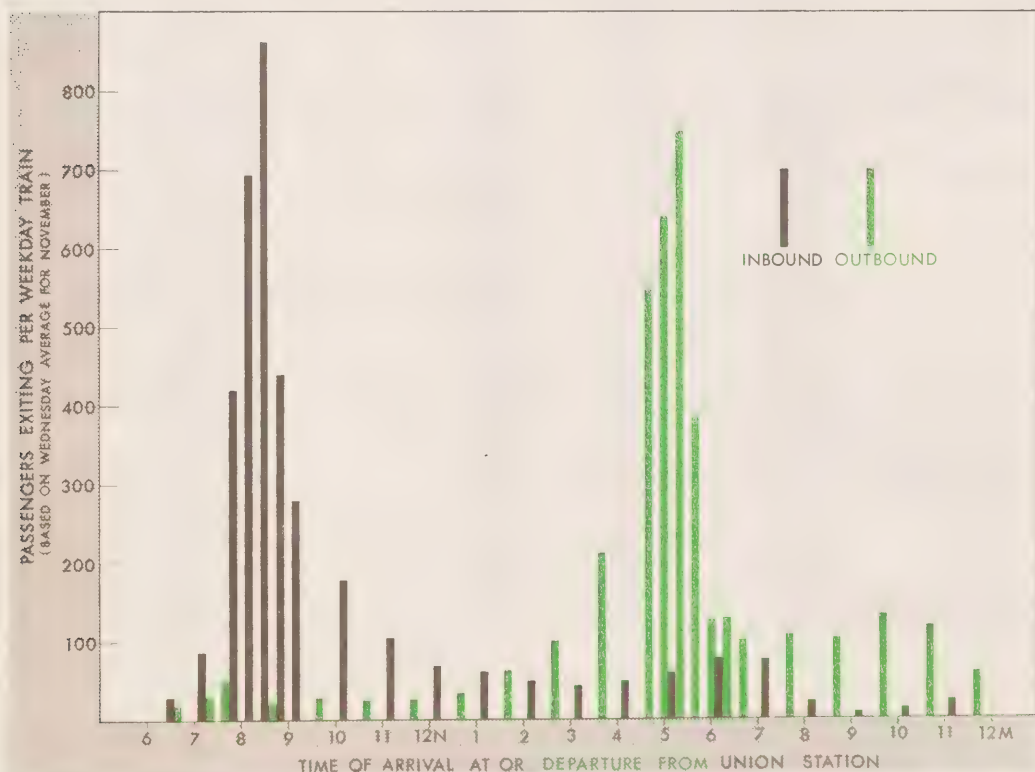


FIGURE 18: Carryings by western corridor trains on an average Wednesday in November.

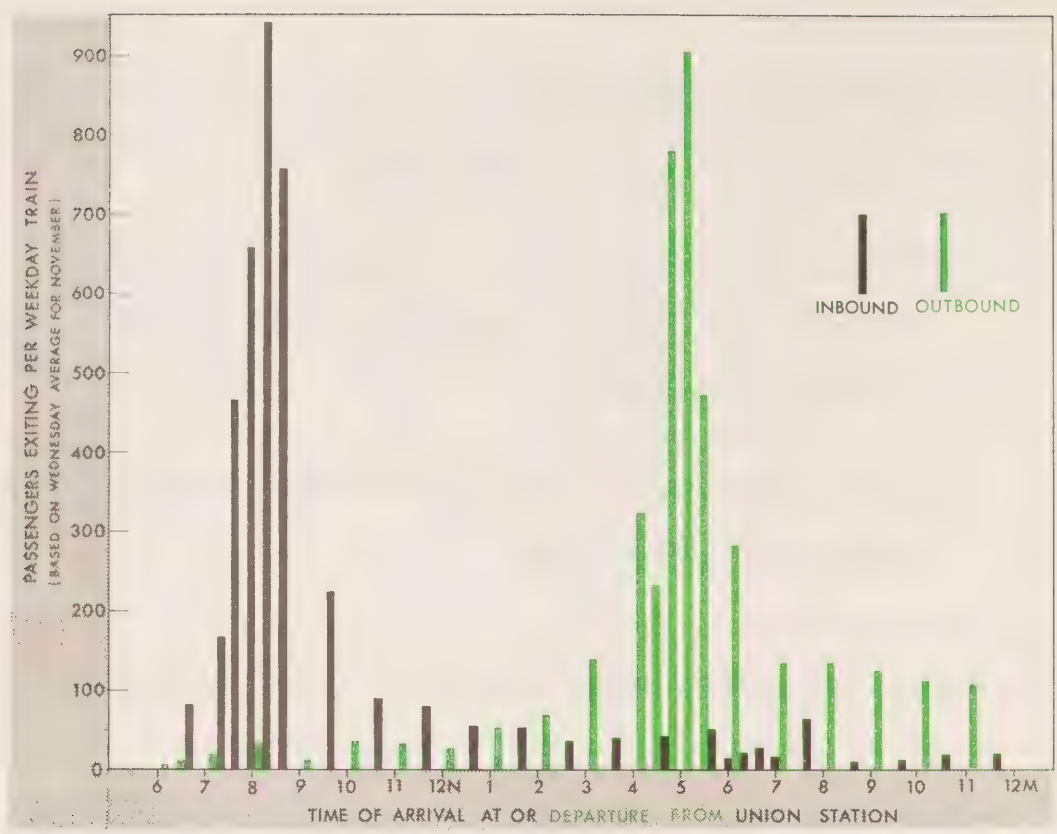


FIGURE 19: *Carryings by eastern corridor trains on an average Wednesday in November.*

The concentration of carryings during the peak period, when the trains operate at 20 minute headways, can be gauged from the table.

	WESTERN CORRIDOR		EASTERN CORRIDOR	
	INbound	OUTbound	INbound	OUTbound
Operating time operates between :	0747 & 0907	1643 & 1843	0717 & 0837	1617 & 1817
Interval of service :	80 mins.	120 mins.	80 mins.	120 mins.
No. of trains operating at 20 minute intervals :	6	6	6	6
No. of passengers carried by these trains :	1,920	2,880	1,920	2,712
Percentage of passengers carried during peak hour :	11	11	11	11
Percentage of passengers carried during peak 15 minutes :	4.4	4.1	4.4	4.0
Percentage of passengers carried during peak 5 minutes :	1.5	1.4	1.5	1.4
Percentage of passengers carried during peak 1 minute :	0.3	0.3	0.3	0.3
Percentage of passengers carried during peak 15 minutes :	74%	71%	76%	67%
Percentage of passengers carried during peak 5 minutes :	24%	30%	21%	23%

2.11 Canadian National Exhibition

GO Transit provided an added convenience for visitors to the annual Canadian National Exhibition in 1967. Fourteen trains per day were re-scheduled to stop at the Dufferin Street Gates during the period of the exhibition from August 18 to September 4.

- A total of 66,000 persons used GO Transit to get to the exhibition during the 15 day period.
- The weekday average number of riders was boosted from 12,100 to 18,500 per weekday by exhibition patrons.



FIGURE 20: Total number of people entering the exhibition ground each day is compared with those who entered via GO Transit.

The number of people carried by GO trains each day followed almost the same pattern as total exhibition patronage, the only notable divergence occurring on the second "Childrens' Day" when high carryings of children by GO Transit caused rail riding to increase, whereas total exhibition patronage fell. GO Transit's share of the gross C.N.E. attendance was around 2%.

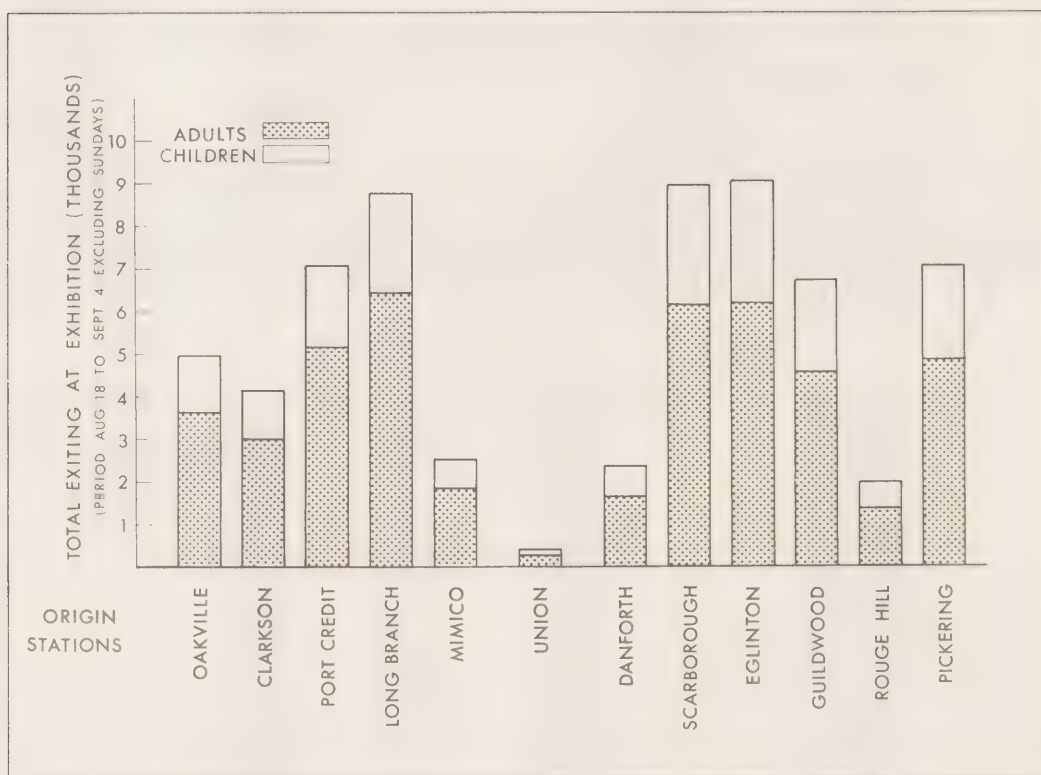


FIGURE 21: The origin stations of children and adults who used GO Transit to get to the exhibition.



3. GENERAL CHARACTERISTICS OF GO TRANSIT RIDERS

3.1 Introduction

The findings of the previous section were derived from data obtained from the counting of tickets. Although this source provides much valuable information, it is nonetheless limited in scope and cannot reveal the individual rider's attitudes and characteristics. For this reason, surveys are conducted from time to time in which train riders are asked to complete special questionnaires. The most recent of these surveys was conducted on November 1, 1967 and the following section outlines some of the results from this survey.

3.2 Transportation used prior to GO Transit

The peak evening commuters (those travelling outbound from Union Station between 4:00 and 7:00 p.m.) were asked "what method of transportation did you use for this type of trip before GO Transit started?" Their response is illustrated in Figure 22.

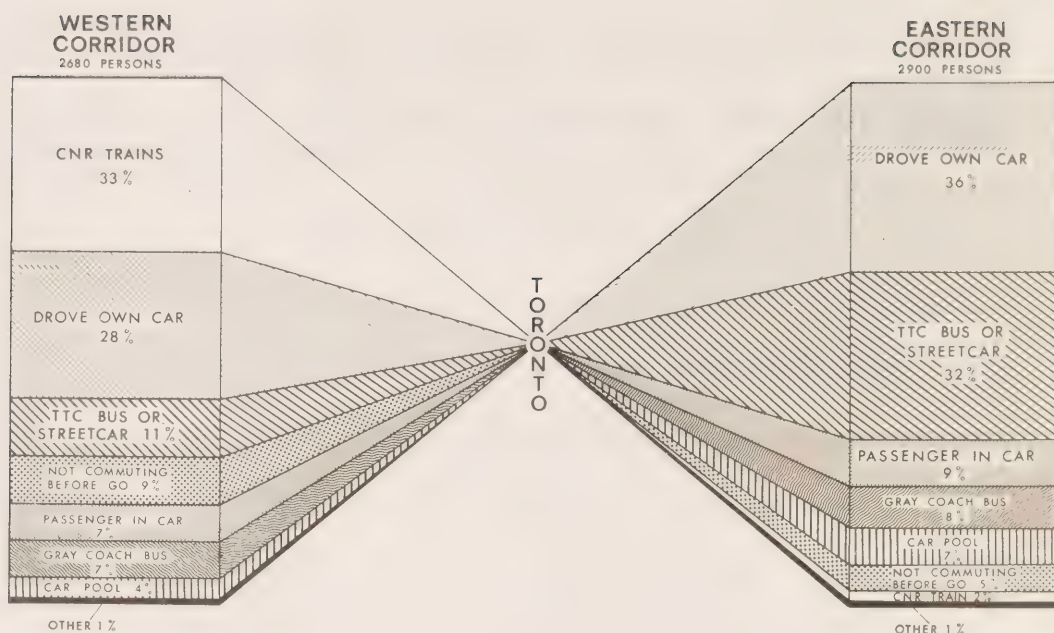


FIGURE 22: Modes of transportation used by survey respondents before GO Transit.

- The automobile was by far the most common mode of transportation used prior to GO Transit

46% of all the respondents said they had previously travelled by automobile; 32% had driven their own car, 8% had been passengers in cars, and 6% had been members of car pools.

- GO Transit attracted a larger number of automobile drivers from the east than from the west

For people living in most of the eastern corridor, direct express highway to Central Toronto does not exist whereas in the west, the Queen Elizabeth Way, a multi-lane expressway highway, parallels the C.N.R. rail track. Also, adequate rail transportation was

not previously available to eastern corridor residents as it was to those in the western corridor. As a result, 36% of GO Transit riding in the east came from automobile drivers compared with 28% in the west.

In total, nearly one third of evening peak riders previously drove cars, suggesting that

- approximately 1,800 additional automobiles would have been on the roads during the busy p.m. peak period had GO Transit not been operating .

From the results above and from an off-peak train survey conducted on the same day (see page 38), it was estimated that GO Transit carried around 3,000 people who would otherwise have used automobiles.

- Canadian National Railways was a most important mode of transportation prior to GO Transit in the western corridor, but was virtually insignificant in the eastern corridor.

This was expected as the Canadian National Railways had been operating two morning inbound and two evening outbound commuter trains between Hamilton and Toronto in the western corridor. This service was cancelled just prior to the inauguration of GO Transit, and most of its patrons switched to the new GO Trains. In the

eastern corridor, however, there was virtually no regular rail service for commuters prior to GO Transit, and other modes of transportation had to be utilized.

- Nearly half (45%) of all respondents had previously used some form of public transportation; 22% had used the T.T.C.
- The previous use of T.T.C. bus or streetcar among GO Transit riders was very much more significant in the eastern than in the western corridor.

The Toronto Transit Commission service spreads out much farther in the eastern part of Metropolitan Toronto than it does in the west. Without a commuter rail service, people in the east relied on public transit (buses) to a much larger degree than those in the west.

The percentage of riders who previously used Gray Coach buses was similar for both corridors. Gray Coach Ltd., operates regular bus services between Toronto and Oakville-Hamilton and Toronto and Oshawa but the frequency and coverage is more extensive in the western than in the eastern corridor.

3.3 Secondary transportation used

Figure 23 illustrates the response from the p.m. peak commuters as to how they got to Union Station and how they would get home from their suburban destination stations.

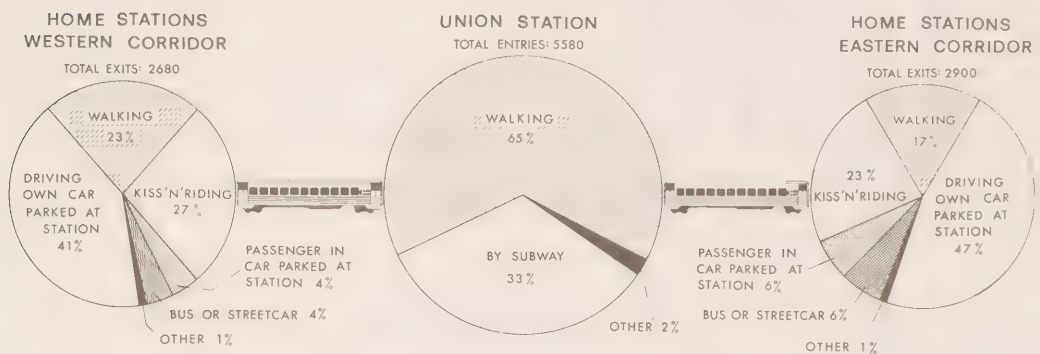


FIGURE 23: Modes of transportation used by survey respondents to go to Union Station and from their suburban destination stations during the afternoon peak.

- Almost all survey respondents reached Union Station by either walking or taking the subway

Nearly two thirds of the riders walked, suggesting that their place of work was fairly close to Union Station.

- Nearly half (45%) of the respondents got home from their suburban station by driving a car which was parked there

Being picked up and walking were the next most popular ways of returning home from the station.

3.4 Purpose of GO Transit trips

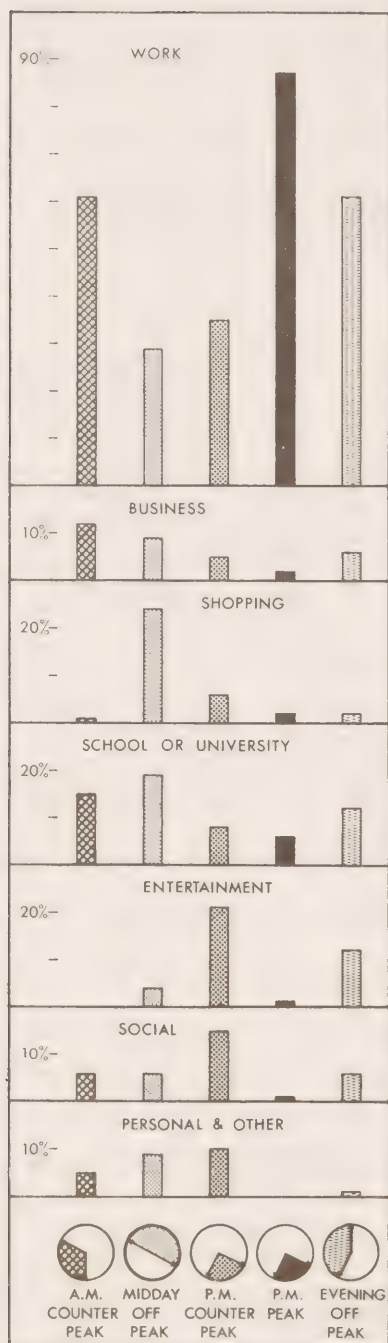


FIGURE 24: The percentage distribution of trip purpose in each time period. (It should be noted that the percentage base was different for each period).

In addition to the evening peak riders, people riding the trains during the defined "off-peak" times were also surveyed on November 1. For methodological reasons, the only people who did not fall within the scope of the survey were those riding the trains before 10:00 a.m., with the exception of people boarding at Union and thus riding in a "counter-peak" or opposite to the peak direction. Thus the large number of morning peak period central commuters were excluded from the survey. Most of these people, however, returned home during the evening peak and the characteristics of these two periods are thought to be similar.

Figure 24 shows how the importance of each activity varied with time of day and (for the 4:00 to 7:00 period) direction of travel. It

should be noted that P.M. peak and counter-peak trips take place in the same time period, but peak trips are those taken in a direction outbound from Union Station, whereas counter-peak trips are taken in an inbound to Union direction.

- Work was the reason for 87% of trips in the p.m. peak period.

The morning peak, had it been surveyed, would have probably shown a similar predominance of work trips.

- Work trips were least important during the midday off-peak, when shopping and school/university accounted for many of the trips.
- Entertainment was a significant trip producer during the p.m. counter-peak and evening off-peak

This reflected the trips to and from the downtown area for evening entertainment purposes.

3.5 Men & women on GO Transit

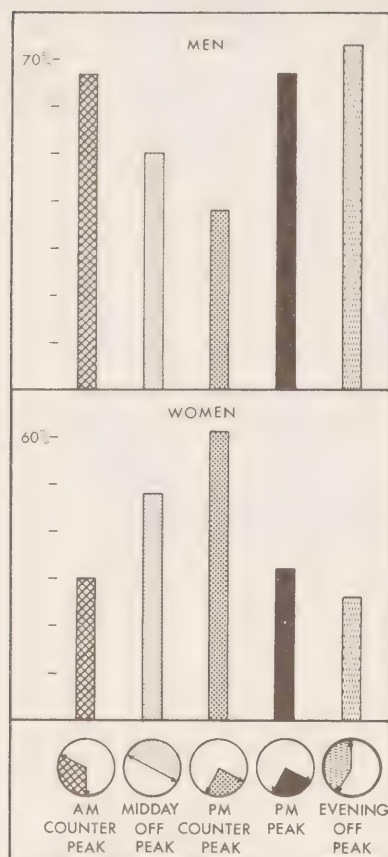


FIGURE 25: The percentage of male and female riders in each time period. (It should be noted that the percentage base was different for each period).

Figure 25 shows how the percentage of male and female riders varied throughout the day.

- Men accounted for two-thirds of the many p.m. peak period riders

Men were also significantly predominant in the A.M. counter-peak and evening off-peak.

- The percentage of women riders was highest during the midday off-peak and p.m. counter-peak

Shopping probably accounted for the importance of female riders during the midday period. Social and entertainment trips were significant

during the P.M. counter-peak (see Figure 24) and these may have accounted for the greater percentage of women riding in that period.

For the P.M. peak period, the ratio of male to female riders was similar for both corridors -- 68% of west-

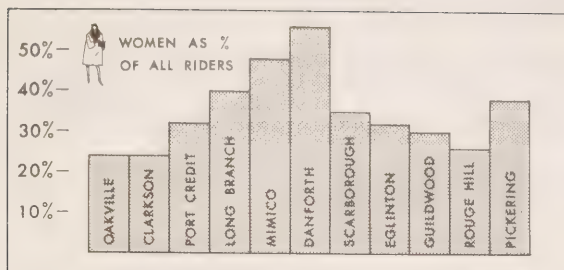


FIGURE 26: Women are shown as a percentage of all riders exiting at suburban stations

bound riders were male, compared with 67% of eastbound. With the exception of Pickering, the percentage of females destined for the various suburban sta-

tions decreased as the distance of the stations from Union increased suggesting that females were less prepared than males to commute a long distance to work.

3.6 Length of time at present address

The p.m. peak riders were asked "how long have you lived at your present address?" Their response to this question is illustrated in Figure 27.

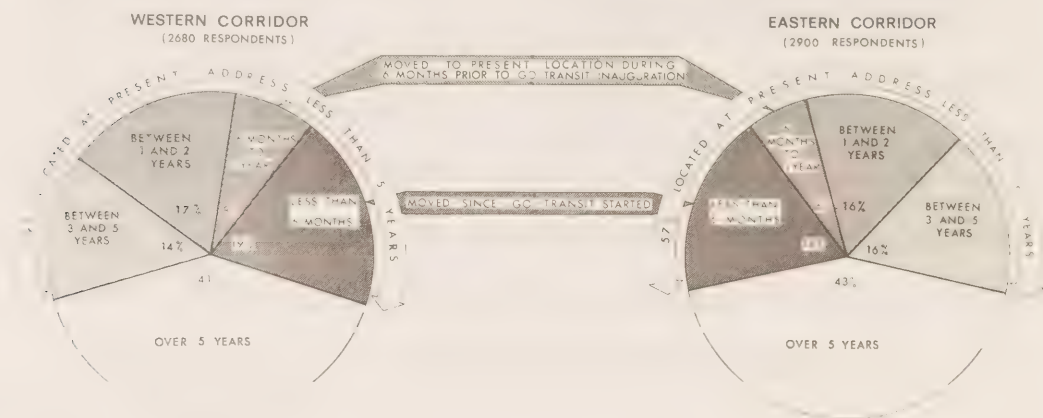


FIGURE 27: Length of time respondents had occupied their present addresses.

- Nearly one fifth of the respondents had located at their present address since the start of GO Transit. Nearly two thirds of these people stated that GO had influenced their choice of location.

The percentage of people who said that GO had influenced their choice of location decreased as the length of time they had occupied their present address increased. It is interesting to note, however, that over one-quarter of the people who had occupied their present address for between one and two years prior to the survey said that they had been influenced by GO, even though the service was not scheduled to commence for several months.



4. PASSENGER RESTRAINTS

4.1. Introduction

This section attempts to document those factors which prevailed between May and December, 1967 and which are thought to have possibly restrained (or, in some cases, boosted) GO Transit patronage. There are many occurrences which may influence commuter rail carryings, but only those factors which can be quantified are included here.

4.2. Internal factors

These are factors which relate directly to the operation of GO Transit and can, to some extent, be controlled. Factors such as location of stations, speed, schedules, noise and comfort of seats etc. all play a part in determining the attractiveness of the service to passengers. These factors, once determined, do not vary from day to day. Other factors, such as availability of seats and free parking spaces and, to a lesser extent, the reliability of the service can change from day to day, and it is these which are briefly described below.

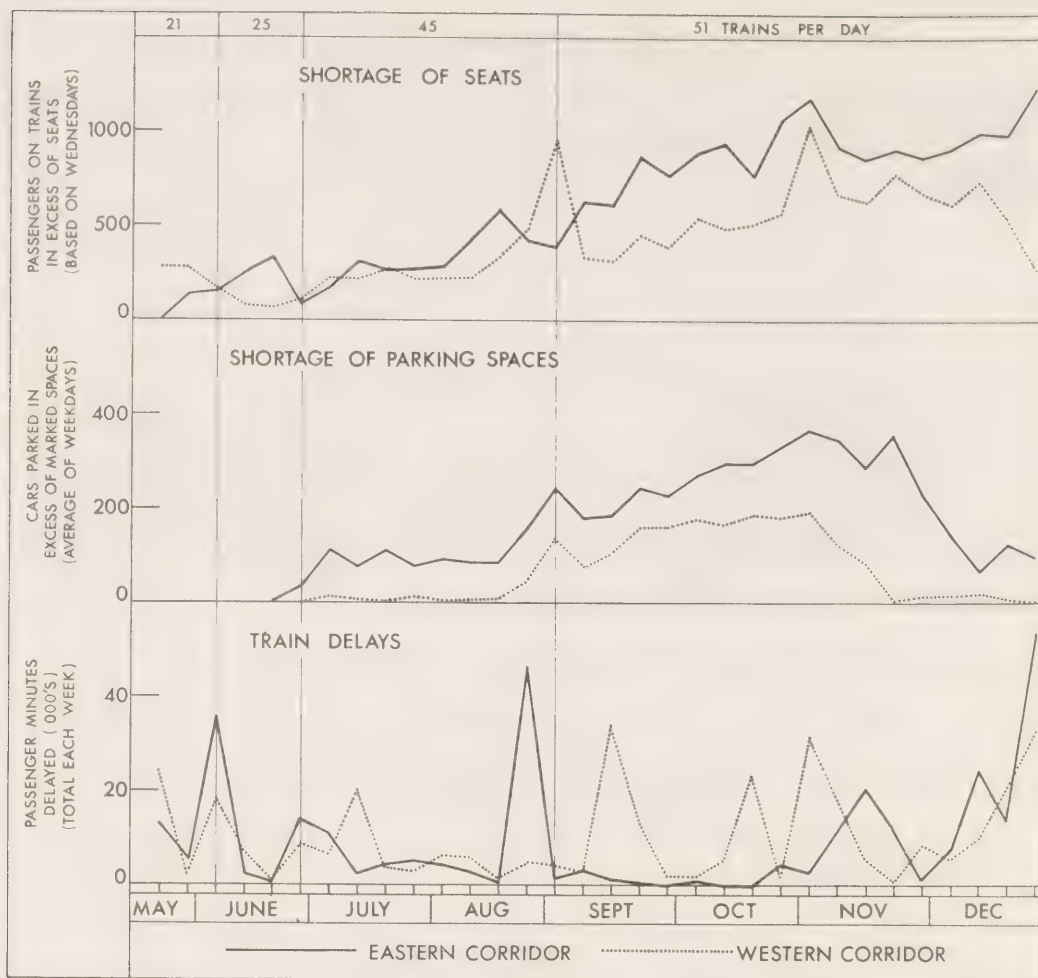
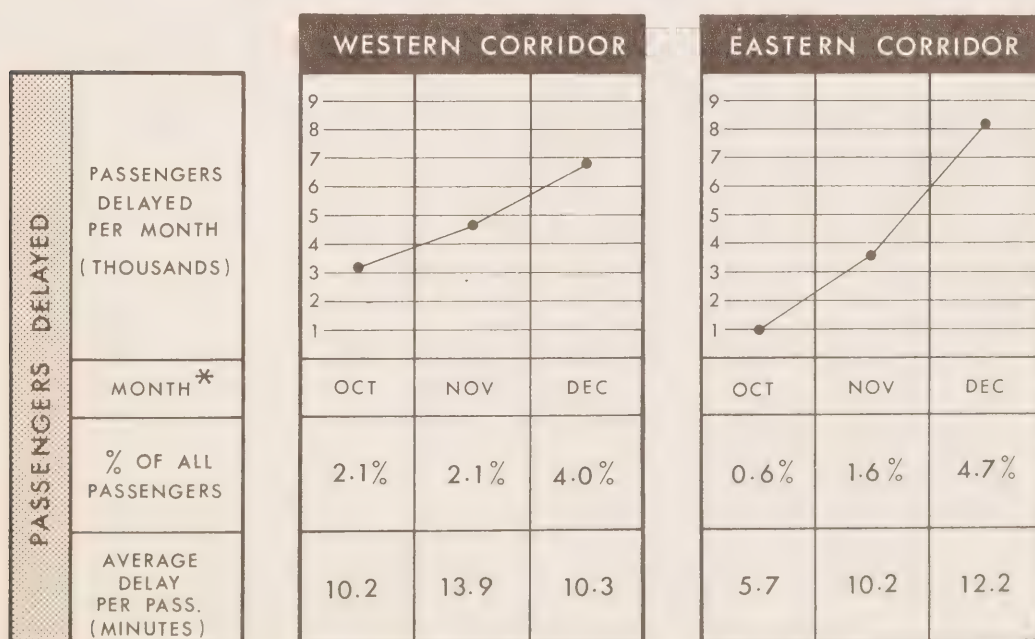


FIGURE 28: *Internal restraints.*

Shortage of seats : This is a restraint which relates to peak period travellers. The dependance of a large number of passengers on a small number of selected trains has resulted in people having to stand from or to some of the inner stations. As the popularity of the service increased, so did this problem, even though additional cars were added to peak trains. In December, standing took place on 7 inbound morning trains and 6 outbound evening trains. Standing was confined to the stations Long Branch to Scarborough inclusive.

Shortage of parking spaces : Although nearly 1750 free parking spaces were provided at the start of the service, the popularity of GO Transit soon caused overcrowding at some of the lots, a situation which reached a peak in November. An extensive program of enlarging the most utilized lots was completed during late November and early December and this eased the situation considerably. By the end of December, a total of over 2,900 spaces were available, an increase of 67% over the original capacity.

Train performance : GO Transit maintained a high degree of reliability as can be seen from the table below, which includes December, the worst month in this period for train reliability, but still a month during which less than 5% of all passengers were delayed.



4.3. External factors

These are factors outside the control of GO Transit, but which nevertheless influence passenger carryings. One such factor was the Canadian National Exhibition, which has already been dealt with, and there were other events which boosted carryings on specific days. These are not identified here as they were short term and spasmodic.

The influence of the weather is a factor to be taken into account, but this is of greater relevance to the months of January, February and March. There were no major snow storms in December and the only noticeable weather effect was due to fog on two mornings, when carryings were significantly boosted.

Another factor to look for is possible changes in competing modes of transportation, but nothing of significance was detected during the period under review.

APPENDICES

5.1 GO Transit schedules

The complete GO Transit schedules --- effective from the start of the full planned service on September 5 through to the end of 1967 --- are shown below.

EASTBOUND – MONDAY THROUGH FRIDAY, EXCEPT HOLIDAYS – EASTBOUND																		
Train No.	HAMILTON	BURLINGTON	BRONTE	OAKVILLE	CLARKSON	PORT CREDIT	LONG BRANCH	MIMICO	TORONTO UNION		DANFORTH	SCAR. BOROUGH	EGLINTON	GUILDWOOD	ROUGE HILL	PICKERING	Train No.	Timetable Notes
									Arr.	Lv.								
902										0613	0622							
946				0550	0557	0602	0608	0615	0627	0633	0642	0648	0653	0658	0703	0709	904	
904				0630	0637	0642	0648	0655	0707	0713	0722	0728	0733	0738	0743	0749	906	
952	0643	0656	0703	0710	0717	0722	0728	0735	0747								908	
906				0730	0737	0742	0748	0755	0807	0813	0822	0828	0833	0838	0843	0849	910	
954	0723	0736	0743	0750		0802	0808	0815	0827								912	
956				0810	0817	0822	0828	0835	0847								914	
908				0830	0837	0842	0848	0855	0907	0913	0922	0928	0933	0938	0943	0949	916	
910				0930	0937	0942	0948	0955	1007	1013	1022	1028	1033	1038	1043	1049	918	
912				1030	1037	1042	1048	1055	1107	1113	1122	1128	1133	1138	1143	1149	920	
914				1130	1137	1142	1148	1155	1207	1213	1222	1228	1233	1238	1243	1249	922	
916				1230	1237	1242	1248	1255	1307	1313	1322	1328	1333	1338	1343	1349	924	
918				1330	1337	1342	1348	1355	1407	1413	1422	1428	1433	1438	1443	1449	926	
920				1430	1437	1442	1448	1455	1507	1513	1522	1528	1533	1538	1543	1549	928	
922				1530	1537	1542	1548	1555	1607	1613	1622	1628	1633	1638	1643	1649	930	
964								1615	1627	1633	1642	1648	1653	1658	1703	1709	932	
966								1635	1647	1653	1702	1708	1713	1718	1723	1729	934	
924				1630	1637	1642	1648	1655	1707	1713	1722	1728	1733	1738	1743	1749	936	
972								1715	1727	1733	1742	1748	1753	1758	1803	1809	938	
926				1730	1737	1742	1748	1755	1807	1813	1822	1828	1833	1838	1843	1849	940	
928				1830	1837	1842	1848	1855	1907	1913	1922	1928	1933	1938	1943	1949	942	
930				1930	1937	1942	1948	1955	2007	2013	2022	2028	2033	2038	2043	2049	944	
932				2030	2037	2042	2048	2055	2107	2113	2122	2128	2133	2138	2143	2149	946	
934				2130	2137	2142	2148	2155	2207	2213	2222	2228	2233	2238	2243	2249	948	
936				2230	2237	2242	2248	2255	2307	2313	2322	2328	2333	2338	2343	2349	950	

NOTE: *No. 954 does not stop at Clarkson—Stops at Lorne Park at 0758.

WESTBOUND - MONDAY THROUGH FRIDAY, EXCEPT HOLIDAYS - WESTBOUND																		
Train No.	PICKERING	ROUGE HILL	GUILDWOOD	EGLINTON	SCAR. BOROUGH	DANFORTH	TORONTO UNION		MIMICO	LONG BRANCH	PORT CREDIT	CLARKSON	OAKVILLE	BRONTE	BURLINGTON	HAMILTON	Train No.	Timetable Notes
							Arr	Lv.										
903	0600	0606	0612	0617	0622	0628	0637	0643	0656	0702	0708	0713	0720				903	
949	0640	0646	0652	0657	0702	0708	0717	0723	0736	0742	0748	0753	0800				949	
905	0700	0706	0712	0717	0722	0728	0737	0743	0756	0802	0808	0813	0820				905	
953	0720	0726	0732	0737	0742	0748	0757	0803	0816								953	
955	0740	0746	0752	0757	0802	0808	0817	0823	0836								955	
907	0800	0806	0812	0817	0822	0828	0837	0843	0856	0902	0908	0913	0920				907	
909	0900	0906	0912	0917	0922	0928	0937	0943	0956	1002	1008	1013	1020				909	
911	1000	1006	1012	1017	1022	1028	1037	1043	1056	1102	1108	1113	1120				911	
913	1100	1106	1112	1117	1122	1128	1137	1143	1156	1202	1208	1213	1220				913	
915	1200	1206	1212	1217	1222	1228	1237	1243	1256	1302	1308	1313	1320				915	
917	1300	1306	1312	1317	1322	1328	1337	1343	1356	1402	1408	1413	1420				917	
919	1400	1406	1412	1417	1422	1428	1437	1443	1456	1502	1508	1513	1520				919	
921	1500	1506	1512	1517	1522	1528	1537	1543	1556	1602	1608	1613	1620				921	
923	1600	1606	1612	1617	1622	1628	1637	1643	1656	1702	1708	1713	1720				923	
967								1703	1716	1722	1728	1733	1740				967	
969								1723	1736	1742	1748		1800	1806	1814	1826	969	*
925	1700	1706	1712	1717	1722	1728	1737	1743	1756	1802	1808	1813	1820				925	
971	1720	1726	1732	1737	1742	1748	1757	1803	1816	1822	1828	1833	1840				971	
973	1740	1746	1752	1757	1802	1808	1817	1823	1836	1842	1848	1853	1900	1906	1914	1926	973	
927	1800	1806	1812	1817	1822	1828	1837	1843	1856	1902	1908	1913	1920				927	
975	1820	1826	1832	1837	1842	1848	1857										975	
929	1900	1906	1912	1917	1922	1928	1937	1943	1956	2002	2008	2013	2020				929	
931	2000	2006	2012	2017	2022	2028	2037	2043	2056	2102	2108	2113	2120				931	
933	2100	2106	2112	2117	2122	2128	2137	2143	2156	2202	2208	2213	2220				933	
935	2200	2206	2212	2217	2222	2228	2237	2243	2256	2302	2308	2313	2320				935	
937	2300	2306	2312	2317	2322	2328	2337	2343	2356	0002	0008	0013	0020				937	

NOTE: *No. 969 does not stop at Clarkson—Stops at Lorne Park at 1751.

EASTBOUND – WEEKENDS AND HOLIDAYS – EASTBOUND

Train No.	HAMILTON	BURLINGTON	BRONTE	OAKVILLE	CLARESON	PORT CREDIT	LONG BRANCH	MIMICO	TORONTO UNION		DANFORTH	SCAR-BOROUGH	EGLINTON	GUILDWOOD	ROUGE HILL	PICKERING	Train No.
									Arr.	Lv.							
902										0613	0622	0628	0633	0638	0643	0649	902
904				0630	0637	0642	0648	0655	0707	0713	0722	0728	0733	0738	0743	0749	904
906				0730	0737	0742	0748	0755	0807	0813	0822	0828	0833	0838	0843	0849	906
908				0830	0837	0842	0848	0855	0907	0913	0922	0928	0933	0938	0943	0949	908
910				0930	0937	0942	0948	0955	1007	1013	1022	1028	1033	1038	1043	1049	910
912				1030	1037	1042	1048	1055	1107	1113	1122	1128	1133	1138	1143	1149	912
914				1130	1137	1142	1148	1155	1207	1213	1222	1228	1233	1238	1243	1249	914
916				1230	1237	1242	1248	1255	1307	1313	1322	1328	1333	1338	1343	1349	916
918				1330	1337	1342	1348	1355	1407	1413	1422	1428	1433	1438	1443	1449	918
920				1430	1437	1442	1448	1455	1507	1513	1522	1528	1533	1538	1543	1549	920
922				1530	1537	1542	1548	1555	1607	1613	1622	1628	1633	1638	1643	1649	922
924				1630	1637	1642	1648	1655	1707	1713	1722	1728	1733	1738	1743	1749	924
926				1730	1737	1742	1748	1755	1807	1813	1822	1828	1833	1838	1843	1849	926
928				1830	1837	1842	1848	1855	1907	1913	1922	1928	1933	1938	1943	1949	928
930				1930	1937	1942	1948	1955	2007	2013	2022	2028	2033	2038	2043	2049	930
932				2030	2037	2042	2048	2055	2107	2113	2122	2128	2133	2138	2143	2149	932
934				2130	2137	2142	2148	2155	2207	2213	2222	2228	2233	2238	2243	2249	934
936				2230	2237	2242	2248	2255	2307	2313	2322	2328	2333	2338	2343	2349	936

WESTBOUND – WEEKENDS AND HOLIDAYS – WESTBOUND

Train No.	PICKERING	ROUGE HILL	GUILDWOOD	EGLINTON	SCAR-BOROUGH	DANFORTH	TORONTO UNION		MIMICO	LONG BRANCH	PORT CREDIT	CLARESON	OAKVILLE	BRONTE	BURLINGTON	HAMILTON	Train No.
							Arr.	Lv.									
903	0600	0606	0612	0617	0622	0628	0637	0643	0656	0702	0708	0713	0720				903
905	0700	0706	0712	0717	0722	0728	0737	0743	0756	0802	0808	0813	0820				905
907	0800	0806	0812	0817	0822	0828	0837	0843	0856	0902	0908	0913	0920				907
909	0900	0906	0912	0917	0922	0928	0937	0943	0956	1002	1008	1013	1020				909
911	1000	1006	1012	1017	1022	1028	1037	1043	1056	1102	1108	1113	1120				911
913	1100	1106	1112	1117	1122	1128	1137	1143	1156	1202	1208	1213	1220				913
915	1200	1206	1212	1217	1222	1228	1237	1243	1256	1302	1308	1313	1320				915
917	1300	1306	1312	1317	1322	1328	1337	1343	1356	1402	1408	1413	1420				917
919	1400	1406	1412	1417	1422	1428	1437	1443	1456	1502	1508	1513	1520				919
921	1500	1506	1512	1517	1522	1528	1537	1543	1556	1602	1608	1613	1620				921
923	1600	1606	1612	1617	1622	1628	1637	1643	1656	1702	1708	1713	1720				923
925	1700	1706	1712	1717	1722	1728	1737	1743	1756	1802	1808	1813	1820				925
927	1800	1806	1812	1817	1822	1828	1837	1843	1856	1902	1908	1913	1920				927
929	1900	1906	1912	1917	1922	1928	1937	1943	1956	2002	2008	2013	2020				929
931	2000	2006	2012	2017	2022	2028	2037	2043	2056	2102	2108	2113	2120				931
933	2100	2106	2112	2117	2122	2128	2137	2143	2156	2202	2208	2213	2220				933
935	2200	2206	2212	2217	2222	2228	2237	2243	2256	2302	2308	2313	2320				935
937	2300	2306	2312	2317	2322	2328	2337	2343	2356	0002	0008	0013	0020				937

5.2 GO Transit fares

GO Transit's basic multiple-ride tariff of 3.5 cents a mile takes into account that rail commuter fares should be competitive with auto commuting costs, and yet not undercut other forms of public transportation.

The minimum fare is 42 cents for trips between stations up to 12 miles apart; the maximum is \$2.00 for the 60-mile trip between the two outer stations, Hamilton and Pickering. Ticket books are sold for \$5.00, \$10.00, \$15.00, or \$20.00 thus reducing the need for making change. The number of tickets contained in each book depends on the distance travelled.

Single ride tickets cost approximately 25 percent more than the multiple-ride fare, with a minimum price of 50 cents. Children under 56 inches in height travel anywhere on the system for a 25 cent fare, while infants in arms are carried free.

The actual fares between the various stations are shown on the next page.

To find the fare between two stations, select name of one station and trace across the line to the right to column bearing the name of the second station.

Single fares are shown in left column and multiple ride reduced fares under column headed "Book", with the cost per book followed by the number of tickets it contains.

Children under 56 inches 25¢ per trip to any station. Infants in arms, no charge.

PICKERING		
	Sale Book \$50	Book \$5-12
BOUCE HILL	\$50	\$5-12
GUILDWOOD	Sale Book \$50	Book \$5-12
EGLETON	Sale Book \$50	Book \$5-12
SCAR-BOROUGH	Sale Book \$50	Book \$5-12
DANFORTH	Sale Book \$50	Book \$5-12
TORONTO UNION	Sale Book \$50	Book \$5-12
MIMICO	Sale Book \$50	Book \$5-12
LONG-BRANCH	Sale Book \$50	Book \$5-12
PORT CREDIT	Sale Book \$50	Book \$5-12
LOMRE PARK	Sale Book \$50	Book \$5-12
CLARKSON	Sale Book \$50	Book \$5-12
OAKVILLE	Sale Book \$50	Book \$5-12
BRONTE	Sale Book \$50	Book \$5-12
BURLINGTON	Sale Book \$50	Book \$5-12
HAMILTON	Sale Book \$50	Book \$5-12

